Profile Page

Name	:	Dr Harpreet Singh
Designation	:	Assistant Professor Grade-i
Department	:	Mechanical Engineering
Qualification	:	PhD Mechanical Engineering (Manufacturing), Indian Institute of Technology Roorkee, U.K., India M.Tech Mechanical Engineering, Indian Institute of Technology Roorkee, U.K., India B.Tech Mechanical Engineering, Punjab Technical University Kapurthala, P.B., India
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Research Interests :

Green Manufacturing, Microwave Processing, Surface Engineering, Nanofinishing, Traditional, Non-traditional, Hybrid Micro Machining, Micro and Nano Machining, Processing and Characterization of Composite Materials: MMCs, PMCs, CMCs, Natural Composites, Surfacing, Cladding, Casting and Joining Technologies, Process Optimization, Additive Manufacturing, FSP, Powder Mixed EDM, CMMRAF

Other Profile Links :

Google Scholar Link :

Google Scholar Click Here

Personal Web Link :

Dr. Harpreet Singh Webpage Click Here

Journal Publications :

Year	Journal	Publication
2023	Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science	Yogendra KD, Harpreet S, Effect of sintering routes on CIP/EIP – Al2O3 composite magnetic abrasive for chemo-mechanical magneto-rheological finishing of aluminium 6061

2022	SAGE part E: Journal of Process Mechanical Engineering, https://doi.org/10.1177/095440892 21074829	Bhoi, N.K., Patel, D.K., Singh, H., Jain, P.K., Multi-physics simulation study of microwave hybrid sintering of aluminium and mechanical characteristics
2022	Journal of Materials Engineering and Performance volume 31, pages 5026–5041	Sahu A.S., Mahapatra S.S., Bhoi N.K., Singh H., Experimental investigation on microwave sintered composite tool for electro discharge machining of Titanium alloy
2022	Journal of Inorganic and Organometallic Polymers and Materials, 32, pages 1319–1333	Bhoi N.K., Singh H., Pratap S., Aluminum yttrium oxide metal matrix composite synthesized by microwave hybrid sintering: processing, microstructure and mechanical response
2022	Journal of Inorganic and Organometallic Polymers and Materials, volume 32, pages 1319–1333	Bhoi NK, Singh H, Pratap S, Gupta M, Investigation on the combined effect of ZnO nanorods and Y2O3 nanoparticles on the microstructural and mechanical behaviour of aluminium composites
2022	Silicon, 14, pages 6621–6635	Patel DK, Bhoi NK, Singh H, Microwave Heating Capabilities of Different Susceptor Material: Experimental and Simulation Study
2021	Journal of Micromanufacturing, https://doi.org/10.1177/251659842 11038878	Yogendra KD, Harpreet S, Chemomechanical magnetorheological finishing: Process mechanism, research trends, challenges and opportunities in surface finishing
2021	Journal of Micromanufacturing, Volume 5, Issue 2, https://doi.org/10.1177/251659842 11038878	Dwivedi Y.K., Singh H., Chemomechanical magnetorheological finishing: process mechanism, research trends, challenges and opportunities in surface finishing
2021	OPSEARCH volume 59, pages350–363 (2022)	Bhoi N.K., Singh H., Pratap S., Chemical reaction optimization algorithm for machining parameter of abrasive water jet cutting
2020	Global Business Review, Volume 24, Issue 1, https://doi.org/10.1177/097215091 9889797	Prajapati D., Harish A.R., Daultani Y., Singh H., Pratap S., A Clustering Based Routing Heuristic for Last-Mile Logistics in Fresh Food E-Commerce
2020	Journal of Composite Materials, Volume 54, Issue 24, https://doi.org/10.1177/002199832 0918646	Bhoi N.K., Singh H., Pratap S., Synthesis and characterization of zinc oxide reinforced aluminum metal matrix composite produced by microwave sintering
2020	Journal of The Institution of Engineers (India): Series C volume 101, pages407–413	Bhoi N.K., Singh H., Pratap S., Synthesis and characterization of alumina nano particles: a case study
2020	Journal of Composite Materials, Volume 54, Issue 6	Bhoi N.K., Singh H., Developments in the aluminum metal matrix composites reinforced by micro / nano particles – A review

Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISSN No.	Year
Book Chapter, The promise of self lubricating aluminum based composite material	Functional Materials and Advanced Manufacturing	CRC Press Taylor & Francis.	Neeraj Kumar Bhoi, Harpreet Singh, Saurabh Pratap	Functional Materials and Advanced Manufactu ring	2020

Book Chapter, Futuristic strategies for the synthesis of aluminum based composite material	Composite materials manufactruing, properties and applications	Elsevier	Neeraj Kumar Bhoi, Harpreet Singh, Saurabh Pratap		2020
Book Chapter, Microwave material processing: a clean, green, and sustainable approach	Sustainable Engineering Products and Manufacturing Technologies	Academic Press Elsevier	Neeraj Kumar Bhoi, Harpreet Singh, Saurabh Pratap	9780128165645	2019
Book Chapter Honing, Lapping	Nanofinishing Science and Technology Basic and Advanced Finishing and Polishing Processes	CRC Press Taylor & Francis.	Harpreet Singh, P K Jain	9781315404103	2016

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
PI	Sponsored	Design and Development of Multi-purpose Microwave Setup	DST-SERB	2019	2022	2323000	Closed	
PI	FIG	Experimental investigation Pertaining to Microwave MMCs	IF	2017	2022	150000	Closed	
PI	Sponsored	Nano finishing of Biomedical Implants	DST-SERB	2023	2026	3305200	Ongoing	

Events Organized :

Category	Type	Title	Venue	From	To	Designation
Conference	International	International Conference on Physics and Mechanics of New Materials and their Applications (PHENMA 2017)	Indian Institute of Information Technology, Design and Manufacturing Jabalpur	14-10-2017	18-10-2017	Organizer

Conference	International	International Conference on Recent Advances in Mechanical Engineering (ICRAME 2017)	IIIT DM Jabalpur	14-04-2017	16-04-2015	Organizer
Conference	International	1st International and 4th National Conference on Reliability and Safety Engineering	Indian Institute of Information Technology, Design and Manufacturing Jabalpur	26-02-2018	28-02-2018	Treasurer
Conference	International	5th International Conference on Machines and Mechanisms (iNaCoMM 2021)	IIITDM Jabalpur	09-12-2021	11-12-2021	Organizer
QIP Short Term Course	National	Recent Advancement in Product Design, Manufacturing and Maintenance Techniques	IIITDM Jabalpur	16-09-2017	20-09-2017	Organizer/Speaker

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Neeraj Kumar Bhoi	Microwave Processing of Aluminium Metal Matrix Composites and their Characterization	Awarded	2022	
Amir Azad Ansari	Some Studies on Chemo-mechanical Magnetorheological Abrasive Finishing	On-going	2022	Prof Prashant KJ
Vivek Pandey	Processing of High Entropy Matrix Composites	On-going	2022	Prof Seetharam R
Shivi Tripathy	Drug adsorption and release behavior of composite microspheres	On-going	2021	Prof Himansu SN
Deepak Kumar	Investigations on High Entropy Alloys for Biomedical Applications	On-going	2020	Prof Seetharam R
Yogendra K Dwivedi	Investigations on Chemo-mechanical Magnetorheological Abrasive Finishing of Functional Surfaces	On-going	2018	
Bikram Singh Solanki	Experimental Investigations on Manufacturing of High Quality Miniature Gears by Injection Molding Process	Submitted	2017	Prof Tanuja S

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Saksham	Experimental investigation on Chemo-mechanical Magnetorheological Abrasive Finishing	On-going	2023	Prof JA Vaz
Shajad Raja	Processing of Natural Composites	On-going	2023	Dr R Bedi
Amit Meti	Investigation on in-situ microwave casting	Awarded	2022	Dr. Ravi P
Ajinkya G. Walkare	Processing of sort natural fibre reinforced polymer matrix composites	Awarded	2022	
Kaustubh Chaudhari	Investigation on magnetorheological abrasive finishing process	Awarded	2022	

Rohit K. Bhande	Study on joining of metals using microwave processing	Awarded	2022	
Sumit Tiwari	Investigation on stainless steel cladding using microwave energy	Awarded	2022	
Deeksha Madankar	Study on microwave cladding to enhance the wear resistance	Awarded	2021	
Deepak Patel	Experimental investigation on microwave casting process	Awarded	2021	
Sourav Majumdar	Experimental investigation on nano powder mixed EDM	Awarded	2021	
Nikhil Kumar	Experimental investigation on plastic behavior of aluminium alloy using FSW	Awarded	2020	
Prabhat K Mishra	Study on precision finishing of functional surfaces using MRF	Awarded	2020	
Richa Mishra	Study on powder mixed EDM for nimonic 90	Awarded	2020	
T Mohammed	Manufacturing and characterization of PMC using single screw extrusion machine	Awarded	2020	
Amit Kumar	Fabrication and characterization of corrosion resistance coatings	Awarded	2019	
Bhishm Dewangan	Study on processing and characterization of sisal fibre composites	Awarded	2019	
Lalan Kumar	Synthesis and characterization of zinc oxide nanoparticles	Awarded	2019	
Manish Kumar	Study on joining of metal using microwave heating	Awarded	2019	
Prakhar Khemka	Study and fabrication of PMCs	Awarded	2019	
Nitish Katiyar	Study on microstructure and mechanical properties of titanium alloys using FSW	Awarded	2019	Dr. MZA

Patents :

Name	**Reg./Ref. No.**	**Date of Award/Filling**	**Organization**	**Status**
Polymer Matrix Composite Manufacturing Machine	20202100898	08-01-2020	Indian Patent	Examination
Microwave Energy Processed Abrasives	P-62-21	20-01-2023	Indian Patent	Filled

Admin. Responsiblities :

Position Held	**Organization**	**From**	**To**
FIC Central Mess	IIITDMJ	Dec 2021	Oct 2022
Warden Aryabhatta Hostel	IIITDMJ	Sept 2020	Jan 2023
FIC Cultural	IIITDMJ	June 2018	Oct 2022
DPGC Member of MED	IIITDMJ	Jan 2022	Jan 2023
Nodal Officer EBSB	PDPM IIITDMJ	Jan 2019	Dec 2021

Award and Honours :

Title	**Activity**	**Given by**	**Year**
MP Young Scientist Award for the Supervised Ph.D. Research Work	Research	MP Govt.	2020

Startup Research Award	RG	SERB, DST, Government of India	2019
International Travel Grant (Young Scientist)	Researcher	Department of Science & Technology (DST), India	2015
Student’s Career Development Fund (SCDF)	CF	IIT Roorkee, UK, India	2015
Best research paper award	Presenter	KU QKV.	2014
MHRD Teaching Assistantship		Government of India	2008